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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte AMAN GUPTA,
AMIT MAHESHWARI,
and JAMES A. YENERICH

Appeal 2010-007449
Application 09/747,645
Technology Center 3600

Before ANTON W. FETTING, JOSEPH A. FISCHETTI, and
BIBHU R. MOHANTY, *Administrative Patent Judges*.

MOHANTY, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF THE CASE

The Appellants seek our review under 35 U.S.C. § 134 (2002) of the final rejection of claims 1-27 which are all the claims pending in the application. We have jurisdiction under 35 U.S.C. § 6(b) (2002).

SUMMARY OF THE DECISION

We REVERSE.

THE INVENTION

The Appellants' claimed invention is directed to providing real-time information about a process capability (Spec. 3:2-3). Claim 1, reproduced below, is representative of the subject matter on appeal.

1. A method for measuring product shipment process capability, comprising:
 - maintaining a database that contains fields indicating at least an order, a max ship date, a customer requested date, and a product category for each order;
 - fetching order information for all orders that have a valid max ship date;
 - subtracting the customer requested date from the max ship date producing a difference value;
 - adding a predetermined number of days to the difference value providing a shipment quality metric for each order; and
 - determining a statistical calculation to indicate process quality using the shipment quality metric.

THE REJECTIONS

The Examiner relies upon the following as evidence in support of the rejections:

Appeal 2010-007449
Application 09/747,645

Deleryd, Mats "On the Gap between theory and practice of process capability studies", 1998, The International Journal of Quality and Reliability Management, Bradford, Vol. 15, Iss. 2 p. 178.

SAS "A SAS Institute White Paper: The Quality Data Warehouse - serving the analytical needs of the manufacturing enterprise", © 1999, SAS Institute, pp.1-11.

Davis, Robert D et al.; "Detecting Process Shifts with X-bar charts", First Quarter 1993, Production and Inventory Management Journal, 34, 1, ABIINFORM Global, p.25.

Harry, Mikel J; "Six Sigma: A breakthrough strategy for profitability", May 1998, Quality Progress, 31, 5; ABIINFORM Global, p.60.

The following rejections are before us for review:

1. Claims 1-2, 4-6, 11-15, and 17-19 are rejected under 35 U.S.C. §103(a) over Deleryd and SAS.
2. Claims 3, 7, 9, 20-22, 24, 25, and 27 are rejected under 35 U.S.C. § 103(a) over Deleryd, SAS, and Davis.
3. Claims 8, 10, 16, 23, and 26 are rejected under 35 U.S.C. §103(a) over Deleryd, SAS, Davis, and Harry.

FINDINGS OF FACT

We find the following enumerated findings of fact (FF) are supported at least by a preponderance of the evidence.¹ Additional facts may appear in the Analysis section below:

- FF1. Deleryd has disclosed theoretical aspects of process capability studies that have been considered in order to receive reliable results (Abstract).

¹ See *Ethicon, Inc. v. Quigg*, 849 F.2d 1422, 1427 (Fed. Cir. 1988) (explaining the general evidentiary standard for proceedings before the Patent Office).

FF2. Deleryd has disclosed that on the y-axis, the deviation of a process location from the target value T is given according to the formula: $[[\mu]-T]/d = [[\mu]-T]/((USL-LSL)/2)$. (Page 4, para. 4).

FF3. SAS discloses how a Quality Data Warehouse can facilitate quality improvement (Page 1, col. 1, ll. 2-5).

FF4. Davis has disclosed detecting process shifts with x-bar charts (Title).

FF5. Davis at page 27, Step 4, discloses a formula for calculating the Z value which is the value to use in a standardized normal table to obtain the probability that an item is nonconforming. The formula is given as: $Z = -(USL-D)/S$.

ANALYSIS

The Appellants argue that the rejection of claim 1 is improper (Br. 4-8, 11-12). In contrast the Examiner has determined that rejection of record is proper (Ans. 4-7, 14-19).

We agree with the Appellants. The Examiner has asserted that the recitation in claim 1 for a database that contains “fields indicating at least an order, a max ship date, and a customer requested date, and a product category for each order” is non-functional descriptive material and we agree with this initial contention. The claimed step of “subtracting the customer requested date from the max ship date producing a difference value” has been asserted by the Examiner to be shown at Deleryd at page 4, para. 4 (Ans. 4) and Deleryd does show a formula which includes at least a basic subtraction function (FF2).

However, claim 1 also specifically requires “adding a predetermined number of days to the difference value providing a shipment quality metric”.

In claim 1, this “shipment quality metric” is then used in “determining a statistical calculation to indicate process quality”. The Examiner has taken Official Notice that it well known in the art “to add a numerical offset to a process metric to handle skewness” and that the claimed step of “adding a predetermined number of days to the difference value providing a shipment quality metric for each order” is therefore known (Ans. 5) and that the combination would have been obvious (Ans. 4-7). Here, while adding a numerical offset to a process metric to handle skewness may be known there is no articulated reasoning with rational underpinnings to take the leap to then specifically “add a predetermined number of days to the difference value providing a shipment quality metric for each order” as the claim requires in the method without impermissible hindsight. For these above reasons the rejection of claim 1 and its dependent claims is not sustained.

Claim 11 contains a similar claim limitation to that of claim 1 addressed above and the rejection of this claim and its dependent claims is not sustained for these same reasons.

Claim 17 also contains a similar claim limitation to that of claim 1 addressed above for specification limits created by “adding a predetermined of days” just prior to and after a customers requested delivery date and the rejection of this claim and its dependent claims is not sustained for the same reasons as well.

With regard to claim 27 the Appellants argue the prior art fails to suggest the claimed limitation drawn to the steps to:

calculate a first Z value by subtracting the mean value from the upper specification limit and dividing by the standard deviation; [and]
calculate a second Z value by subtracting the lower specification limit from the mean value and dividing by the standard deviation (Claim 27).

These first and second “Z values” are used in claim 27 in a subsequent determination step. The Examiner has asserted that these steps are found in Davis at page 27, step 4 (Ans. 9-10). While Davis at this citation does disclose the calculation of a “Z value” (FF5) there is not the express calculation of both a first and second “Z value” in the manner claimed. Further, we see no articulated reasoning with rational underpinnings for combining the cited prior art to meet the requirements of the claim without impermissible hindsight. For these reasons the rejection of claim 27 is not sustained as well.

CONCLUSIONS OF LAW

We conclude that Appellants have shown that the Examiner erred in rejecting claims the claims listed in the Rejection section above.

DECISION

The Examiner’s rejection of claims 1-27 is reversed.

REVERSED

MP